

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-21. (canceled)

22. (original) Biocompatible coating, **characterised in that** the coating comprises,

a binding layer in contact with the substrate comprising mainly hydrated calcium aluminate particles of less than 2 μm ,
a bulk layer comprising mainly hydrated calcium aluminate having a grain size between 3 and 30 μm , and
an outer layer comprising a bioactive or biocompatible material, preferably calcium phosphate, apatite, calcium carbonate or calcium fluoride.

23. (original) Biocompatible coating according to claim 22, **characterised in that** the coating is capable of carrying drugs.

24. (original) Surface coated device, comprising a substrate and a surface coating covering at least a section of the substrate surface, **characterised in that** the surface coating is a biocompatible surface coating made by using the method comprising the steps of:

-preparing one powder mixture, or several powder mixtures having different chemical composition, wherein at least one of said powder mixtures comprise a non-hydrated hydraulic ceramic powder binder phase,

-pre-treating the surface of a substrate to increase the adhesion between the substrate and the ceramic coating,

-applying one or more layers of said non-hydrated powder mixtures on top of each other on the substrate, and

-hydrating the powder layer/layers utilizing a curing agent comprising ions of carbonates, phosphates or fluorides.

25. (original) Surface coated device according to claim 24, **characterised in that** the substrate is Ti or alloys thereof, stainless steel, Co-Cr alloys, another biocompatible metal, polymeric or ceramic material, or any combination thereof.

26. (original) Surface coated device according to claim 24, **characterised in that** it is a medical device, medical device for implantation, artificial orthopedic device, spinal implant, joint implant, attachment element, bone nail, bone screw, or a bone reinforcement plate.

27.(original) Surface coated device according to claim 24, **characterised in that** the surface coating is a biocompatible surface coating comprising:

a binding layer in contact with the substrate comprising mainly hydrated calcium aluminate particles of less than 2 μm ,

a bulk layer comprising mainly hydrated calcium aluminate having a grain size between 3 and 30 μm , and

an outer layer comprising a bioactive or biocompatible material, preferably calcium phosphate, apatite, calcium carbonate or calcium fluoride.